

**Subject: glowbugs V1 #165**

**glowbugs**

**Friday, November 28 1997**

**Volume 01 : Number 165**

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Date: Thu, 27 Nov 1997 11:35:00 EST

From: nels@juno.com (Larry Szendrei)

Subject: 805 vs. 211

Someone on the list had asked me if the 805 was electrically the same as a 211, and was contemplating the use of either tube in a Hartley. Unfortunately, just as I had completed my response and tried to send it, my computer locked up and I lost both the reply and the message I was replying to. So, I'll post my answer to the list.

The 211 is not electrically identical to the 805. The 805 is a bit heftier (125W vs. 100W plate dissipation for the 211) and the  $\mu$  of the 805 is ~50 compared with 12 for the 211. That being said, both are fine tubes in a Hartley Glowbugge application, and the difference in characteristics will probably not be noticed, except the optimum value of grid leak might be slightly different. I have a 1950 ARRL handbook that lists characteristics and typical operating conditions for practically any transmitting tube in existence at that time, and it's a great resource.

Keep on glowin'...

Larry (NELS)

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Date: Thu, 27 Nov 1997 11:35:00 EST

From: nels@juno.com (Larry Szendrei)

Subject: Tinkerin' with the TNT and 1929 AWA QSO party

Well, I've been off work since last Saturday, and have been putting some time in on the TNT rig in preparation for the 1929 Bruce Kelley Memorial QSO party coming up the next two weekends (6pm Sat. to 6pm Sun (EST), Nov 29-30 and Dec 6-7). Until now, this rig has been confined to 160M, and running pp 801A's. The QSO party is on 80M, so I wound up a copper tubing plate coil (3/16" tubing, 12T, 2.5" dia.). I had ballparked a grid coil for 80M (or so I thought) a few years ago.

Upon smoke testing the lash-up with the new "coilage", I found it was resonating on 2.8Mc, and concluded I probably wouldn't do well in the QSO party on that frequency. (I had to add quite a bit of capacitance across the plate tank to get it to oscillate at all.) I took several turns off the grid coil, and now she's optimized for the low 100 Kc of 80M.

Since the "contest" rules require that the tube(s) in the transmitter must be a type in existence in 1929, the 801A's were out. So I borrowed a pair of '45's from an old broadcast radio chassis I have, and plugged those in. The rules also limit plate input to 10W, so I reduced my plate voltage from 400 (my power supply uses a voltage divider to do this - it's a reincarnated Kolster power supply/audio output chassis using the original power transformer). I know that this breaks all the (other)

rules, because regulation is lousy, but the end result seems to be acceptable: the note is a bit chirpy, but not too bad, as long as the loading is kept light. In this event, I'm sure there will be even more "interesting" sounding signals! Key down I've got ~265V @ 35 mA for about 9W input, and as far as I can tell I'm getting 2-3W out to the aerial (antennas won't work right with these rig, hi!).

Hope for good conditions, and to see some of you on 3580 - 3595 Kc this weekend!!!

73 fer now...  
Larry (NE1S)

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Date: Thu, 27 Nov 1997 08:49:49 -0800 (PST)  
From: Ken Gordon <keng@uidaho.edu>  
Subject: Re: Push-pull Hartley...

On Thu, 27 Nov 1997, Roderick M. Fitz-Randolph wrote:

> >Bob (or anyone else for that matter), got any schematics for a Push-pull  
> >Hartley?  
> >  
> >Ken W7EKB  
>  
> Now, I'd be interested in that answer, as well!!  
>  
> Rod, N5HV  
> w5hvv@aeneas.net

I DID find a push-pull self-excited oscillator circuit in my old Nilson and Hornung "Practical Radio Communications" handbook, but it doesn't look quite like a Hartley since the cathodes are grounded directly and the tap on the coil goes to the grids.

I would be happy to send this circuit diagram and description to anyone for an SASE.

Address below on the left.

Kenneth G. Gordon W7EKB	College of Mines and Earth Resources
226 N. Washington St.	//or// University of Idaho
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Great Highland Pipes, Amateur Radio, Electronic Consulting, Home-Schooling	
Traditional Roman Catholic	

My PGP Public Key Upon Request.

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Date: Thu, 27 Nov 1997 11:34:50 -0600 (CST)  
From: Kevin Pease <hamradio@mm1001.theporch.com>  
Subject: 15 meters open

Guys I just worked Guyana on 15 meters with my HT-37 and L4 to a verticle. The band is open today. Pretty good signals alover the world. I also worked bermuda.

Kevin Pease  
WB0JZG  
Mount Juliet, TN.

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Date: Thu, 27 Nov 1997 18:52:05 EST  
From: nels@juno.com (Larry Szendrei)  
Subject: Re: Tinkerin' with the TNT and 1929 AWA QSO party

Hi Sandy,

Times are as I stated, 6PM EST Sat. to 6PM EST Sun for the next two weekends.

Freq. is 3580 - 3595 Kc.

Exchange RST, year & type of transmitter, and power input. I'm not sure if "year" means the "style year" or the year the transmitter was actually constructed. Maybe another AWA member on the list (BA Bob?) can enlighten us?

Quoting from page 39 of November's AWA Journal:

"The 1929 QSO Party is open to members using transmitters of 1929 or earlier vintage. These may be self-excited types such as the Hartley, TNT, push-pull tuned-plate-tuned-grid, etc. The MOPA transmitter is also acceptable. The power input must be 10 Watts or less. Participants are encouraged, but not required, straight keys and regenerative or other vintage receivers."

I'm not sure to interpret this to mean that contest participation is only open to AWA members???

Logs, citing equipment used, are to be sent to John Rollins, W1FPZ HC33, Box 150, Arrowsic, Maine 04530.

I also see in the same issue that the AWA now has a website at <http://www.ggw.org/freenet/a/awa/>. Haven't visited yet, but will check it out soon.

73,  
Larry (NE1S)

On Thu, 27 Nov 1997 21:24:37 +0000 Sandy W5TVW <ebjr@worldnet.att.net> writes:

>  
> Larry,  
>  
> You got the contest poop? (times, exchanges, etc.) I'll have  
>to put my

>'10 Hartley on the air!  
> 80 has been pretty good lately!

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Date: Thu, 27 Nov 1997 20:24:15 -0800 (PST)  
**From: Ken Gordon <keng@uidaho.edu>**  
**Subject: PP oscillator circuit...**

I have re-drawn this circuit (from my 3rd edition "Practical Radio Communications" by Nilson and Hornung.

Anyone wanting a copy, SASE (one stamp) to address below on the left.

Anyone have a decent Hartley PP oscillator schematic?

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Date: Thu, 27 Nov 1997 22:42:13 -0800 (PST)  
**From: Ken Gordon <keng@uidaho.edu>**  
**Subject: PP Osc. Transmitter...**

I have finished drawing it with GCADD. From my "Practical Radio Communications" book circuit, I added a keying circuit (one cap and a key), and an antenna coupling circuit (one inductor, a tuning cap, and a flashlight bulb). Then I made a parts list.

Now to see if it will work.

Do you guys remember our discussion a few months ago about the 15 watt 12AX7 ?

Ken W7EKB

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Date: Fri, 28 Nov 1997 10:01:12 -0500 (EST)  
**From: EWoodman@aol.com**  
**Subject: Tuned Plate-Tuned Grid Osc**

I'm sitting here looking at a picture and schematic of a tuned plate - tuned grid transmitter from 1930. It's built on a board with a big copper tubing coil on each end and two tuning caps. In the middle it has one of those 204A horizontally mounted triodes. Looks really nice.

But here's the scary part.....2500 volts on the plate and draws 200ma!!!! Those guys were crazy! Did people actually run open breadboard rigs like that? Don't suppose that meets the new regs for rf exposure.

By the way, was someone looking for a push-pull schematic? I've got one for a push-pull TNT rig.

Happy Thanksgiving      Eric   K1YRV

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Date: Fri, 28 Nov 1997 09:34:39 -0600 (CST)  
**From:** Bob Roehrig <broehrig@admin.aurora.edu>  
**Subject:** Re: PP Osc. Transmitter...

On Thu, 27 Nov 1997, Ken Gordon wrote:

> Do you guys remember our discussion a few months ago about the 15 watt  
> 12AX7 ?

I remember it, not much about what was said though. I think a 12AU7 would be a better choice - more than double the plate power ratings.

"No one is listening until you make a mistake"  
E-mail broehrig@admin.aurora.edu                      73 de Bob, K9EUI  
CIS: Data / Telecom    Aurora University, Aurora, IL  
630-844-4898    Fax 630-844-5530

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Date: Fri, 28 Nov 1997 07:53:17 -0800 (PST)  
**From:** Ken Gordon <keng@uidaho.edu>  
**Subject:** Re: PP Osc. Transmitter...

> > Do you guys remember our discussion a few months ago about the 15 watt  
> > 12AX7 ?  
>  
> I remember it, not much about what was said though. I think a 12AU7  
> would be a better choice - more than double the plate power ratings.

Or a 12BH7. :-)

Ken

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Date: Fri, 28 Nov 1997 10:47:01 -0500  
**From:** Steve Modena <ab4el@MindSpring.com>  
**Subject:** Please help this person

I received the following note (see below) at my Website where I "rebroadcast" BOATANCHORS and GLOWBUGS via <http://SunSITE.unc.edu/modena/hamradio.html>.

Please help Andre out by email ( i.e. do not reply to me. :^)

- --

73/Steve/AB4EL

- -----Cut Here-----

>>From: andre <andre@italnet.com.br>

Dear Srs:

I'm a research in audio tube circuits and need informations(datasheets, pinouts, etc) of the next tubes:

6111

EC760

DC762

I would built news microphones and desire test this small tubes in my new projects.

What the directions to take this informations?

- --

Whith my best regards, thanks a lot Andre from Brazil  
andre@italnet.com.br

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Date: Fri, 28 Nov 1997 14:30:23 -0500 (EST)

From: **rdkeys@csemail.cropsci.ncsu.edu**

Subject: **Re: Tuned Plate-Tuned Grid Osc**

>

> I'm sitting here looking at a picture and schematic of a tuned plate - tuned  
> grid transmitter from 1930. It's built on a board with a big copper tubing  
> coil on each end and two tuning caps. In the middle it has one of those 204A  
> horizontally mounted triodes. Looks really nice.

Yup.... That was quite common amongst the ``well heeled'' hams of that era. The Headquarters station ran just such a set for a couple of years on 80M, until a flood wiped the station out, if memory serves me correctly. It is shown in some of the QST's and handbooks of the early 30's.

On a big double ended tube like the '04A, a Hartley was sometimes impractical because of long lead length. The use of a split transmitter such as a TPTG or a TNT circuit allowed the tube to be mounted on a long board, or upside down vertically (remember to hang '04A's upside down so the filament won't sag, if vertical) and have the shortest possible tank leads. Things like the 849 and even the 833 lend themselves well to the TPTG circuit.

> But here's the scary part.....2500 volts on the plate and draws  
> 200ma!!!! Those guys were crazy! Did people actually run open breadboard  
> rigs like that? Don't suppose that meets the new regs for rf exposure.

Yup, folks ran those things, very carefully. Technically, these days, the things need to be behind a panel enclosure of some kind (Nat. Elect. Code), with all controls grounded for DC and AC. Just be careful if you run one that big, open. Even ol' Boatanchor Bob gets a tad timid when the plates get beyond 1 keelovoltie.

> By the way, was someone looking for a push-pull schematic? I've got one for a  
> push-pull TNT rig.

Good, saves the grid circuit tank capacitor requirement. TNT's are a tad more fussy to tune, since the grid coil is actually a very low Q tank composed of strays and a poor Q coil. That is why it is working as a Tuned Not Tuned set..... the grid circuit is Not Tuned (other than a coarse approximation of strays and the low Q coil). A fully tuned set Tune Plate Tuned Grid (TPTG) is usually better, if you have a second capacitor available for the grid circuit. They are easier to control and set compared to the TNT variety. My OM swore by the TNT circuit, though, in the early 30's, but I have never had good success compared to Hartleys or TPTG circuits, with them. The TNT's work, but can be REAL squirrely if you are not very careful. There is a lot of fiddlin to get the grid coil on a TNT set ``just right''. The Hartleys are rock solid, all the time. One of these days I will try a Colpitts and an Ultraudion circuit and see how they compare with the Hartleys and TPTG's.

Well, Sandy and I were on with the Hartleys last night at around 0600Z, where were the rest of the crewe???????? I worked around half a dozen niteowls with Grandma Hartley and the regenerator, maybe 5 wattoes de ethere output, into a random 66 foot wire sort of slung up into a tree. Surely others can do likewise? Comments Sandy????

Beat the bushes.... round up the crewe..... etc.....(:+)}.....

All hands listen up on 3585-3595 this weekend for the AWA boys and their 1929 style contest. There are some ``real gutsy and lusty'' signals there. Sadly Bruce Kelley's primary keyed set will probably not be heard, unless one of the AWA crew runs it up. That thing had the finest bell tone keying you have ever heard on a self controlled oscillator. If I had not let my membership lapse, I would be there with ol' Grandma Hartley and Twinnie Triode. Do listen in, tho, for some funzies signals.

Bob/NA4G

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End of glowbugs V1 #165  
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